

Volcanic Incense Device with Quartz Sand Thermal Regulation and PG-Enhanced Oud Chips

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Title: Volcanic Aroma Diffusion Apparatus Using Bamboo Charcoal and Quartz Sand for Controlled Oud Vaporization

Field: Aromatherapy, incense burners, and fragrance diffusion systems



Abstract

A device and method for controlled aromatic diffusion using a specially shaped bamboo charcoal incense block resembling a volcano. The internal chamber is filled with quartz sand for heat regulation, into which pre-treated oud chips are embedded. The oud chips are lightly soaked with propylene glycol (PG) or a PG/vegetable glycerin (VG) blend to enhance vaporization and diffusion effects. This design achieves gradual heating, prevents charring, and creates a visible 'volcano effect' vapor emission.

Description of the Invention

1. Structure:

- The incense device comprises a **cone-shaped bamboo charcoal block** with a **central cavity** and a **horizontal or vertical chimney-style exhaust hole** at the top.
- The base of the charcoal cone is optionally seated on a **porous stone or ceramic ring** for insulation and aesthetics.

2. Quartz Sand Layer (Thermal Buffer):

- The **central cavity** of the cone is **filled with fine quartz sand**.
- Quartz sand acts as a **thermal resistor and heat buffer**, reducing the intensity of heat that reaches the oud chips. This prevents the chips from burning and instead allows them to release aroma-rich vapor over time.
- The **sand thickness** can be adjusted to regulate the temperature of the embedded material (ideal for oud vaporization without combustion).

3. Aromatic Material – PG-treated Oud Chips:

- **Oud chips** used in this device are **pre-soaked in a minimal amount of PG or PG/VG mixture**, ensuring they are **not wet**, but fully penetrated with the solvent.
- PG acts as a **vapor carrier**, enhancing the diffusion of the aromatic compounds.
- When heat slowly reaches the chips (due to the insulating quartz sand), the chips **release vapor through the chimney**, producing a **gentle, smoke-like emission** akin to a volcanic plume.

4. Optional Foil Separation Layer:

- A thin **metal or foil disc** may be inserted between the **hot upper sand layer** and the **chips**, serving as:
 - A **secondary thermal barrier**
 - A **platform** for evenly diffusing heat
 - An access layer to replace or isolate the chips
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Advantages Over Prior Art

- Prevents direct combustion of oud chips, allowing **longer and cleaner diffusion**
 - Quartz sand **ensures controlled heat transfer**
 - PG-soaked chips allow for a **volcano-style vapor effect** with **richer aroma release**
 - Low cost, natural materials: **bamboo charcoal, quartz sand, oud, and PG**
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Potential Claims

1. A charcoal-based incense burner featuring a conical cavity filled with quartz sand for heat regulation.
2. The inclusion of PG- or PG/VG-treated oud chips embedded in quartz sand within the device.
3. A method of aroma diffusion involving gradual heating via quartz sand to vaporize, not burn, aromatic material.
4. The optional use of a foil separator layer between heated sand and aromatic material.
5. A visual and aromatic “volcano effect” produced by controlled vapor release through the top vent.